

What is claimed is:

1. A backlight device comprising at least a light source, a light guide plate and a reflector wherein

5 the light guide plate further provides an entry face into which light from the light source is incident, a lower face substantially perpendicular to the entry face and that opposes the reflector, and an upper face that opposes the lower face, and

reflective elements that are capable of reflecting such that light is emitted from the lower face toward the reflector are disposed on the upper face of the light guide plate.

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2. A backlight device comprising at least a light guide plate and a reflector wherein

the light guide plate further provides an entry face into which light from the light source is incident, a lower face substantially perpendicular to the entry face and that  
15 opposes the reflector, and an upper face that opposes the lower face, and

when the luminance representing the luminance of light from an exit face of the backlight device that reaches the maximum at angle  $\theta$  max is A, the luminance B of light emitted from the light guide plate lower face fulfills the relational expression  $B \geq 0.25A$ .

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3. The backlight device according to claim 2 wherein reflective elements that are capable of reflecting such that light is emitted from the lower face toward the reflector are disposed on the upper face of the light guide plate.

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4. The backlight device according to any of claims 1 to 3 wherein the reflective elements are formed as an integrated body with the light guide plate.

5. The backlight device according to either of claim 1 or claim 2 wherein the reflector has reflective grooves disposed on the surface thereof that reflect light emitted from the lower face of the light guide plate to the light guide plate side.

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6. The backlight device according to either of claim 1 or claim 2 wherein the

reflector has a metallic film disposed on the surface thereof.

7. The backlight device according to either of claim 1 or claim 2 wherein the light guide plate is comprised of polymethyl metacrylate, a polyolefine resin,  
5 polycarbonate or a compound of these.

8. The backlight device according to either of claim 1 or claim 2 wherein the distance between the upper face and the lower face of the light guide plate is 0.3-3.0 mm.

10 9. The backlight device according to either of claim 1 or claim 2 wherein the reflective elements are formed by disposing a plurality of V-shaped grooves on the upper face of the light guide plate substantially parallel to the entry face.

10. The backlight device according to claim 9 wherein  
15 the reflective elements comprise:  
the first face that is inclined toward the side of the light guide plate closest to the light source viewed from inside the light guide plate and  
the second face that is inclined toward the face opposite the light source viewed from inside the light guide plate, and  
20 the angle  $\theta_1$  formed between the first face and the upper face is  $0.2-5^\circ$  and the angle  $\theta_2$  formed between the second face and the upper face is not more than  $90^\circ$ .

11. The backlight device according to either of claim 1 or claim 2 wherein an anisotropic diffusion pattern is formed as an integrated body with the lower face of the  
25 light guide plate.

12. The backlight device according to claim 11 wherein the anisotropic diffusion pattern is a surface relief hologram.

30 13. The backlight device according to either of claim 1 or claim 2 wherein an optical sheet that deflects light emitted from the light guide plate so as to approach

traveling direction of light to the direction normal to the upper face of the light guide plate is disposed in a position opposing the upper face of the light guide plate.

14. A light guide plate used in a backlight device comprising at least a light source, a light guide plate and a reflector wherein

the light guide plate further provides an entry face into which light from the light source is incident, a lower face substantially perpendicular to the entry face and that opposes the reflector, and an upper face that opposes the lower face, and

when the luminance representing the luminance of light an exit face of the backlight device that reaches the maximum at angle  $\theta_{\max}$  is A, the luminance B of light emitted from the light guide plate lower face fulfills the relational expression  $B \geq 0.25A$ .

15. The light guide plate according to claim 14 wherein reflective elements that are capable of reflecting such that light is emitted from the lower face toward the reflector are disposed on the upper face.

16. The light guide plate according to claim 14 wherein the reflective elements are formed as an integrated body with the light guide plate.

17. The light guide plate according to 14 wherein the light guide plate is comprised of polymethyl metacrylate, a polyolefine resin, polycarbonate or a compound of these.

18. The light guide plate according to claim 14 wherein the distance between the upper face and the lower face is 0.3-3.0 mm.

19. The light guide plate according to claim 14 wherein an anisotropic diffusion pattern is formed as an integrated body with the lower face.

20. The light guide plate according to claim 14 wherein the anisotropic diffusion pattern is a surface relief hologram.

21. A liquid crystal display device comprising a backlight device using the light guide plate according to any of claims 14 to 20 and liquid crystal display elements illuminated by this backlight device.